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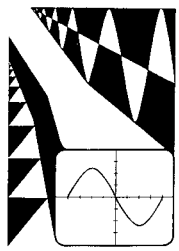

15 MHz. Dual channel oscilloscope

PM3207

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9499 440 19915

790215

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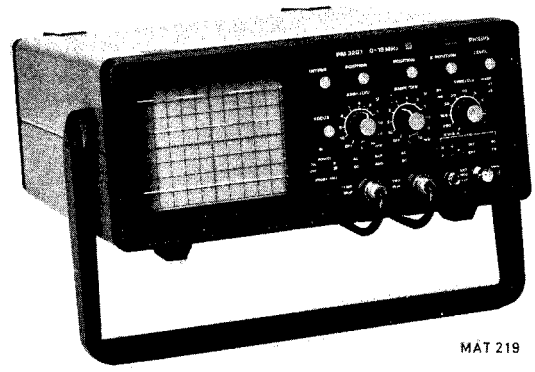

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IMPORTANT

In correspondence concerning this instrument, please quote the type number and serial number as given on the type plate.

WICHTIG

Bei Schriftwechsel über dieses Gerät wird gebeten, die genaue Typenbezeichnung und die Gerätenummer anzugeben. Diese befinden sich auf dem Leistungsschild.

IMPORTANT

RECHANGE DES PIECES DETACHEES (Réparations)

Dans votre correspondance et dans vos réclamations se rapportant à cet appareil, veuillez TOUJOURS indiquer le numéro de type at le numéro de série sont marqués sur la plaquette de caractéristiques.

NOTE: *The design of this instrument is subject to continuous development and improvement.*
Consequently, this instrument may incorporate minor changes in detail from the information contained in this manual.

BEMERKUNG: *Die Konstruktion und Schaltung dieses Geräts wird ständig weiterentwickelt und verbessert.*
Deswegen kann dieses Gerät von den in dieser Anleitung stehenden Angaben abweichen.

REMARQUES: *Cet appareil est l'objet de développements et amélorations continuels.*
En conséquence, certains détails mineurs peuvent différer des informations données dans la présente notice d'emploi et d'entretien.

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1. INTRODUCTION

The PM 3207 is a compact lightweight dual-trace oscilloscope, featuring ergonomic design and extensive measurement capabilities. The wide range of use includes educational, research and service applications.
The maximum sensitivity is 5 mV/div and the bandwidth is 15 MHz.
The instrument has several trigger modes including TV triggering.

2. CHARACTERISTICS

This instrument has been designed and tested according to IEC Publication 348 for Class II instruments and has been supplied in safe condition.
These data apply at an operating temperature between +5 °C and 40 °C and after a warming-up period of 15 min.

CRT

Measuring area	8 x 10 div. (1 div. = 1 cm)
Screen type	P31 (GH), Optional P7 (GM)
Total acceleration voltage	1.5 kV

Vertical amplifier

Display modes	A; A±B; ±B; A and B (chopped in ms – alternated in µs position)
Input coupling	AC/DC
Bandwidth	DC : 0 Hz . . . 15 MHz (–3 dB) AC : 10 Hz . . . 15 MHz (–3 dB)
Deflection accuracy	± 5 %
Input impedance	1 MΩ // 35 pF
Max. permissible input voltage	400 V (DC + AC peak)
Chopper frequency	100 kHz approx.

Time base

Coefficient error	± 5 %
Additional error for x5 magnifier	± 2 %

Trigger

Source	Ch. A; Ch. B; EXT.
Mode	AC/TV
Sensitivity INT:	0.75 DIV. } Trigger freq. ⩽ 100 kHz ; 1.5 DIV. } Trigger freq. ⩽ 15 MHz
EXT:	0.75 V ; 1.5 V
Trigger frequency range	10 Hz . . . 15 MHz
Input impedance	1 MΩ // 35 pF
Max. permissible input voltage	400 V (DC + AC peak)

X-deflection	
Source	Y_A-input; Time base
Frequency range	DC: 0 . . . 2 MHz (–3 dB)
Phase shift	3° at 10 kHz
Power supply	Double insulated
Nominal voltage range	110; 220 or 240 V_{AC} ± 10 %
Nominal frequency range	46 . . . 66 Hz
Power consumption	25 W (30 VA) max.
Mechanical data	
Length	370 mm incl. controls (450 mm incl. handle)
Width	297 mm excl. handle (330 mm incl. handle)
Height	129 mm excl. feet (138 mm incl. feet)
Weight	46 N (4.7 kg)

3. OPTIONAL ACCESSORIES

PM 9326	Passive probe 1 : 1 / 10 : 1; 1,1 m
PM 9327	Passive probe 1 : 1 / 10 : 1; 2,1 m
PM 9328	Set of two passive probes 1 : 1 / 10 : 1
PM 8921 (L)	Passive probe 1 : 1; 1,5 m (2,5 m)
PM 8925 (L)	Passive probe 10 : 1; 11 pF; 1,5 m (14 pF; 2,5 m)
PM 8932	Passive probe 100 : 1; max. voltage 2000 V; 1,2 pF; 1,5 m
PM 9355	Current probe; 12 Hz ... 70 MHz
PM 9366	Collapsible viewing hood
PM 8980	Closed, long type viewing hood

4. DIRECTIONS FOR USE

Safety regulations (in accordance with IEC 348)

Before connecting the instrument to the mains (line), visually check the cabinet, controls and connectors etc., to ascertain that no damage has occurred in transit. If any defects are apparent, do not connect instrument to the mains (line). The instrument must be disconnected from all voltage sources, and any high voltage points discharged before any maintenance or repair work is carried out. If adjustments or maintenance of the operating instrument with covers removed is inevitable, it must be carried out only by a skilled person who is aware of the hazards involved. In normal operation the double-insulated power supply obviates the need of a safety ground.

WARNING: IT MUST BE BORNE IN MIND THAT IN ALL MEASUREMENTS THE FRAME GROUND OF THE OSCILLOSCOPE IS RAISED TO THE SAME POTENTIAL AS THAT OF THE MEASURING GROUND PROBE CONNECTION.
NEITHER THE PROBE'S GROUND LEAD NOR THE FRAME GROUND SHALL BE CONNECTED TO LIVE POTENTIALS.

4.1. Local mains (line) connection

Before connecting the instrument to the mains (line), make sure that it is set to the local mains (line) voltage. On delivery, the instrument is set to 110 V, 220 V or 240 V, which is indicated on the rear of the instrument. If the instrument has to be set to another voltage as indicated, contact your local service organisation.

4.2. Controls and sockets

Cathode-ray tube and power controls

1. POWER	Mains switch; pilot lamp indicates the ON-state
2. INTENS	Trace-brillance control; clockwise turning increases brillance of the trace (spot)
3. FOCUS	Beam-focussing control; enables focussing of beam for minimum spot size. For correct display FOCUS and INTENS should be optimally adjusted.

Vertical deflection

4. POSITION	Control (by turning) for vertical shifting of the trace (spot)
5. AMPL/DIV OFF	Control of vertical deflection coefficients, ranging from 5 mV/DIV up to 10 V/DIV in a 1-2-5 sequence. In the "OFF"-position the input is floating and no trace will be displayed. If both "AMPL/DIV" switches are in "OFF"-position, the base line of channel B is displayed only.
6. AC DC	Input signal coupled via a blocking capacitor and the DC component is blocked. Input signal directly coupled.
7. A&B ADD	Both channels are displayed, chopped (ms) or alternated (μs). Sum signal of channels A and B will be displayed (see "+/−").
8. $\frac{+}{-}$	Slide switch: In "+" position for usual operation. In "−" position the inverted signal of channel B will be displayed. In combination with ADD, A-B will be displayed.
9. A	BNC-socket for channel A input.
10. B	BNC-socket for channel B input.

Time-base and horizontal deflection

11. X POSITION	Control (by turning) for horizontal shifting of the trace (spot).
12. LEVEL	Control for adjusting the point (level) on the input signal slope from which the trigger signal is derived.

13. $\frac{\mu s}{ms}$ — Slide switch; in combination with the TIME/DIV switch selects the time coefficients. In A&B-mode the display is chopped in position ms and alternated in position μs.

14. MAGN $\frac{x1}{x5}$ — Slide switch; allows increase of the horizontal deflection by a factor of 5.

15. TIME/DIV — In combination with the μs/ms switch, selects the time coefficients from 0.5 μs/DIV to 200 ms/DIV in a 1-2-5 sequence.

16. X VIA A — In the position X via A, horizontal deflection is determined by the channel A input signal (bandwidth $\leqslant$ 2 MHz).

> **CAUTION:** Extended high intensity may damage CRT especially with a stationary or slow-moving spot.

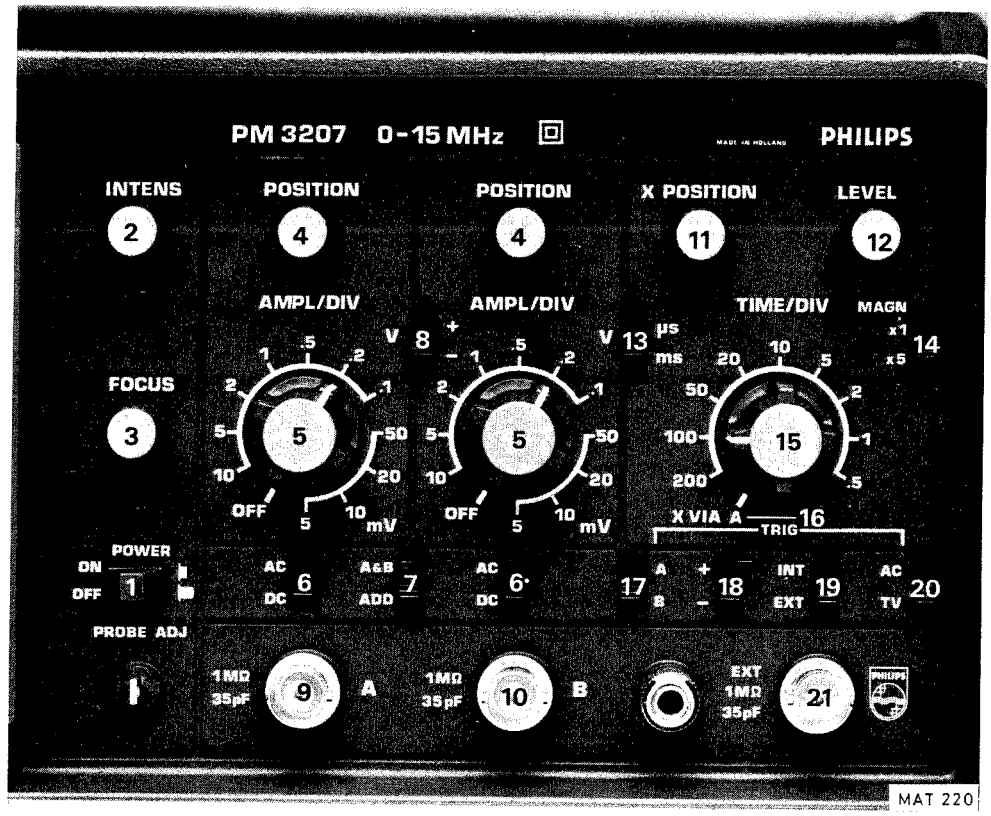
17. $\frac{A}{B}$ — Slide switch; triggering is effected on the signal derived from channel A or B, depending on the switch position.

18. $\frac{+}{-}$ — Slide switch; enables triggering on the positive-going (+) or negative-going (−) slope of the input signal.

19. $\frac{INT}{EXT}$ — Slide switch; the time base can trigger either on a signal derived from channel A or B, or on a signal applied to BNC connector EXT.

20. $\frac{AC}{TV}$ — Slide switch; normal triggering. DC component of the trigger signal is blocked.
TV line or TV frame synchronisation is obtained. (Frame in position ms, and line in position μs).

21. EXT — BNC socket for external trigger input.



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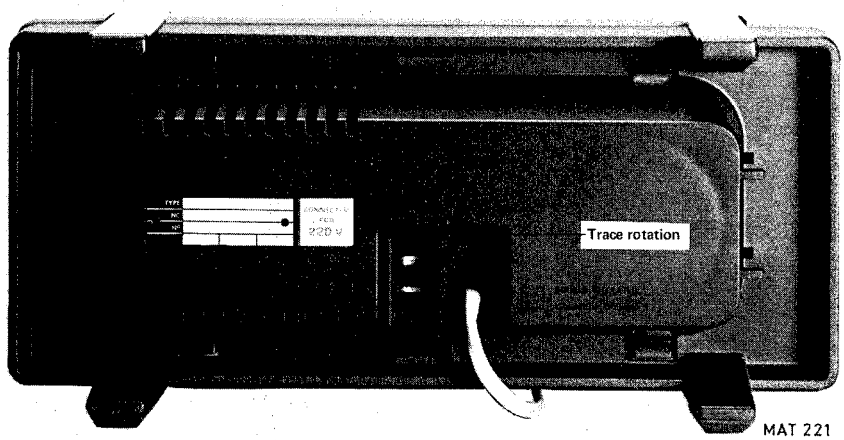

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